



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/588,538

08/07/2006

Reinhold Meier

5038.1035

8360

23280 7590 12/08/2009  
Davidson, Davidson & Kappel, LLC  
485 7th Avenue  
14th Floor  
New York, NY 10018

EXAMINER

PAIK, SANG YEOP

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

12/08/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,538	<b>Applicant(s)</b> MEIER, REINHOLD	
	<b>Examiner</b> SANG Y. PAIK	<b>Art Unit</b> 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6 and 8-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 12 is objected to because of the following informalities: claim 12 listed on the amendment filed on 0/3/09 should have been claim 11. This seems to be a typo, and for purposes of examining, claim 12 as listed in the amendment is treated as claim 11. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6 and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, there is no proper antecedent basis for "the at least two gas turbine components".

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3742

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt et al (US 5,245,155) or Guo (US 2004/0191064) in view of Boetcher et al (US 2,288,433) or Stone (US 2,662,277).

Pratt shows the method claimed including the welding of gas turbine components with a laser powdered-up welding to join two gas turbine components together, and Guo also shows the method claimed including the welding of gas turbine components that are aligned with a laser powdered-up welding. But, Pratt or Guo does not show the claimed method of joining components via an auxiliary weld prior to the welding.

Boetcher or Stone show that it is well known in the art to bring the welding components together and provide an initial welding to hold the components together before filler metals are introduced to complete the welding process.

In view of Boetcher or Stone, it would have been obvious to one of ordinary skill in the art to adapt Pratt or Guo with an auxiliary weld to weld and hold the aligned components prior to introducing the powdered-up welding to ensure a proper alignment of the adjoining parts of the components to allow a more secured powdered up welding process.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt or Guo in view of Boetcher or Stone as applied to claim 6 above, and further in view of Jones (US 4,224,499) or Mega et al (US 2004/0169022).

Pratt or Guo in view of Boetcher or Stone shows the method claimed except for an auxiliary weld that is produced by laser welding or electron-beam welding.

Jones or Mega shows that it is well known in the art that an laser welding is used for butt welding two adjoining elements, and it would have been obvious to one of ordinary skill in the art to adapt Pratt or Guo, as modified by Boetcher or Stone, with an auxiliary welding performed by laser or electron beam welding since such welding is well known in the art that can alternatively to provide an effective welding means to join two adjoining components.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt or Guo in view of Boetcher or Stone as applied to claim 6 above, and further in view of Baumann (US 2,492,833) or Lysholm (US 2,200,287).

Pratt or Guo in view of Boetcher or Stone shows the method claimed except for the components comprise at least two rotor discs with an axially extending flange.

Baumann or Lysholm shows gas turbines having rotor discs with axially extending flanges that are welded together.

In view of Baumann or Lysholm, it would have been obvious to one of ordinary skill in the art to adapt Pratt or Guo, as modified by Boetcher or Stone, with the rotor discs having an axially extending flange as such rotor discs are well known in the gas turbines which allow for alternatively secured attachment to each other.

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pratt or Guo in view of Boetcher or Stone as applied to claim 6 above, and further in view of Baumann (US 2,492,833) or Lysholm (US 2,200,287).

Pratt or Guo in view of Boetcher or Stone shows the method claimed except or the components comprise at least two rotor discs with an axially extending flange that are welded together.

Baumann or Lysholm shows gas turbines having rotor discs with axially extending flanges that are welded together, and as applied to claim 7, Boetcher or Stone show that it is well known in the art to bring the welding components together and provide an initial welding to hold the components together before filler metals are introduced to complete the welding process.

In view of Baumann or Lysholm, it would have been obvious to one of ordinary skill in the art to adapt Pratt or Guo with the rotor discs having an axially extending flanges as such rotor discs are well known in the gas turbines and provide an auxiliary weld as taught by Boetcher or Stone to hold and weld the extending flanges along the intersection wherein a pool crater, a space between the flanges of the rotor discs, is created and formed for the powder build up welding to allow a more secured weld joints between the rotor discs.

### ***Response to Arguments***

9. Applicant's arguments filed 9/3/09 have been fully considered but they are not persuasive.

With respect to Guo, the applicant argues Guo does not teach or disclose any aligning. This argument is not deemed persuasive since Guo clearly shows the aligning of the turbine blade components as illustrated in Figure 2.

With respect to Pratt, the applicant argues that there is no need to provide the method of aligning and joining by an auxiliary weld since Pratt has a separate fixture for supporting the workpiece. This argument is not deemed persuasive since Pratt does not teach away any additional means to support, join, and align the components to be welded, and as an auxiliary weld is provided as taught by Boetcher or Stone, the welding process will be enhanced with a more secured joined parts before process prior to finalizing the welding process.

With respect to Boetcher or Stone, the applicant argues there is no reason to look to either Boetcher or Stone since they are not showing the turbine components. This argument is not deemed persuasive since Boetcher or Stone is in the same field of endeavor which is in the field of joining of parts with welding, and the advantages shown in Boetcher or Stone would have also yield the predictable result as claimed.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3742

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANG Y. PAIK whose telephone number is (571) 272-4783. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571) 272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SANG Y PAIK/

Primary Examiner, Art Unit 3742



Application/Control Number: 10/588,538  
Art Unit: 3742

Page 8